

(*Corvus coronoides*) which attacks his oranges as the initial predator.

The White-tailed Black Cockatoo, as shown by Perry (1948: 133), has resorted to the pine cones in the large plantations as part of its staple diet in recent years.

It is an interesting fact that all these birds only show interest in new foods during the winter period when the natural food is scarce. Twenty-eights do not eat pie melons except during this period. King Parrots do not worry the orchardist while the Marri is flowering.

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HERPETOLOGICAL MISCELLANEA

By L. GLAUERT, M.B.E., Western Australian Museum, Perth.

XII. THE FAMILY SCINCIDAE IN WESTERN AUSTRALIA.

PART 3—THE GENUS *ABLEPHARUS*

Small skinks with no movable eyelid, a transparent disk covering the eye. Ear distinct; nostril pierced in the nasal; a supranasal present or absent. Parietals meet behind the interparietal. Limbs more or less developed. The lizards of this genus can be distinguished from *Lygosoma* by the immovable lower eyelid which is permanently fused in position over the eye.

KEY TO THE SPECIES

- I. Frontoparietals and interparietal fused. Fingers 5, toes 5.
 Upper eyelid represented by 3 or 4 enlarged scales, frontal not half the size of the interparietal *boutonii*
 Eye surrounded by granules, frontal more than half the size of the interparietal.
 Ear opening with 1 or 2 lobules, supranasals absent *lineo-ocellatus*
 Ear opening without lobules, supranasals present *taeniopleurus*

II. Frontoparietals fused, interparietal free. Fingers 5, toes 5.

Frontonasal in contact with the rostral and the frontal, limbs do not meet *davisi*
Frontonasal separated from the frontal, limbs meet or overlap.

Fingers 5, toes 5 *wotjulum*

Fingers 4, toes 5 *greyii*

Fingers 3, toes 3 *rhodonoides*

III. Frontoparietals and interparietals free.

Fingers 5, toes 5. 28 scales round the body *reginae*

Fingers 5, toes 5. 22 scales round the body *broomensis*

Fingers 4, toes 4 *elegans*

Fingers 3, toes 3 *muelleri*

Fingers 2, toes 3 *lineatus*

Ablepharus boutonii (Desj.)

Form fairly slender, the distance between the tip of the snout and the fore limb from $1\frac{1}{3}$ to $1\frac{1}{2}$ in the distance between the axilla and the groin. The eye has upper eyelid represented by 3 or 4 flat scales. Rostral widely in contact with the frontonasal. Pre-frontals large, in contact or slightly separated. Frontal longer than its distance from the tip of the snout, almost as long as the fused frontoparietals and interparietal, in contact with the first two supraoculars, touching the interparietal. Supraoculars 5, the 2nd the largest. One pair of nuchals. Ear opening large, with a single lobule. Scales smooth the two vertebral series somewhat enlarged, laterals smallest, subcaudals largest. Limbs well developed with 5 digits, the adpressed limbs overlap. Tail longer than the head and body. In one specimen selected head and body, 45 mm., tail, 55 mm.

More or less uniform olive-brown or olive-black, dorsally with or without small pale or dark spots, an indistinct pale dorsolateral line from the eye over the ear, to the tail, sides spotted, under surface pale; tail dark spotted, limbs above like the back, below like the under surface.

Very widespread in the State. Several subspecies have been recognised.

Ablepharus lineo-ocellatus (Gray)

Form slender, the distance between the tip of the snout and the fore limb 1.4 to 1.8 in the distance between the fore limb and the hind limb. Eye completely surrounded by granules. Rostral widely in contact with the frontonasal, which forms a narrow suture with the frontal. Frontal nearly as long but narrower than the fused frontoparietals and interparietal, in contact with the 1st and 2nd supraoculars; 4 supraoculars, the 2nd and 3rd the largest; one pair of nuchals; 4 upper labials in front of the much enlarged subocular. Ear opening oval with one or two lobules. Scales round the body in 26 or 28 rows, smooth, largest on the back, smallest on the sides. Limbs well-developed with 5 digits, when adpressed

they meet or overlap. Tail somewhat longer than the head and body.

Total length, 113 mm. ($4\frac{3}{8}$ in.). Head and body, 53; tail, 60; fore limb, 14; hind limb, 21.

Olive or brownish, head shields spotted with black; back with more or less numerous white black-edged ocelli in transverse series on the nape but more or less in longitudinal series on the body and tail. A white band, not visible from above, starts on the snout, passes under the eye and through the ear to the hind limbs, a faint black border separates it from the immaculate whitish under-surface. Limbs like the back but without the ocelli.

Distribution very widespread, from Northampton in the west to Esperance in the east; it occurs on most islands off the west coast.

Ablepharus taeniopleurus Peters

Form normal, the distance between the tip of the snout and the fore limb 1.4 to 1.6 in the distance between the axilla and the groin. Eye completely surrounded by granules. Rostral in contact with the frontonasal, which is about as wide as long and in contact with the frontal. Nasals divided to form supranasals; prefrontals large. Frontal about as long as its distance from the tip of the snout, in contact with 2 supraoculars, much smaller than the fused frontoparietals and interparietal; 4 supraoculars; one pair of nuchals; 4 upper labials in front of the enlarged subocular. Ear opening large, oval, without lobules. Preanals slightly enlarged. Scales, smooth, subequal. Limbs well-developed with 5 digits, the adpressed limbs overlap slightly. Tail longer than the head and body. Length, 4 in. Head and body, 39 mm.; tail, 62 mm.

Fresh specimens are blackish above with a white dorsolateral band extending from the tip of the snout over the eye and over the ear to the base of the tail. Below this is a wider dark band which passes through the eye and over the ear to the tail. This is followed by a narrower white stripe from the upper lip to the end of the body; it is separated from the pale under surface by an ill-defined greenish black area which starts on the lower lip and passes under the ear. The tail in life is reddish.

Museum specimens are from Marrilla Station near Exmouth Gulf, De Grey Station, and from Wotjulum Mission Station near Yampi Sound.

Ablepharus davisii Copland

Form rather sturdy, the distance between the tip of the snout and the fore limb $1\frac{2}{3}$ in the distance between the fore limb and the hind limb. Eye not completely surrounded by granules, there being 10 only. Suture between the rostral and the frontonasal long. Frontonasal wider than long. Prefrontals separated. Frontal kite-shaped as wide as the supraocular region, as long as its distance from the tip of the snout, in contact with the first supraocular. Frontoparietals fused; interparietal distinct, smaller than the

frontal. Ear opening irregularly rounded, without distinct lobules. Four upper labials in front of the enlarged subocular. One pair of nuchals. Scales smooth, in 24 rows at the middle to the body; dorsals larger than the laterals, smaller than the subcaudals. Tail considerably longer than the head and body, limbs short, pentadactyle, when adpressed they do not meet. Length, $2\frac{1}{2}$ in. ($26 + 37$ mm.).

Greenish with much brown on the head, tail and limbs; most of the dorsal scales, with two or three blackish lines which tend to form longitudinal lines. Head with many dark spots; upper lip and under surface almost colourless; laterally each scale has a dark speck forming 4 or 5 indistinct lines between the fore and hind limbs.

Known only from Munja Station, West Kimberley.

Ablepharus wotjulum Glauert

Form slender, the distance between the tip of the snout and the fore limb 1.3 to 1.4 in the distance between the fore limb and the hind limb. Eye completely surrounded by granules. Rostral having a short suture with the frontonasal, which is wider than long and about the size of the prefrontals. Prefrontals forming an oblique suture separating the frontonasal from the frontal. Frontal much wider than the supraocular region, much smaller than the fused frontoparietals, in contact with the first supraciliary and the much enlarged first supraocular; interparietal larger than the frontonasal; 2 pairs of enlarged nuchals; 3 upper labials in front of the much enlarged subocular, enlarged supraoculars almost in contact behind the frontal. Ear opening oval or subtriangular without lobules. Tail about $1\frac{1}{2}$ times as long as the head and body. Limbs pentadactyle, when adpressed they slightly overlap. Scales smooth, in 30-32 rows, the largest on the back, smallest on the sides.

Metallie or pale bronzy above. A strong black dorsolateral band just visible from above begins at the nostril, passes through the eye and over the ear to the base of the tail, where it becomes indistinct. It is bordered above by a fine white line and below by a stronger white band starting on the upper lip passing under the eye and through the ear to the hind limbs. An indistinct and broken dark band separates this from the whitish under surface. The upper and lower labials are dark-edged as also are the chin shields; the limbs speckled with darker above; tail bronzy, in life it was reddish. Widely-spaced black dots may be present along the vertebral line, becoming more distinct on the tail; there may also be faint dark spots scattered elsewhere on the back.

So far this species is known only from Wotjulum Mission, opposite Yampi Sound, West Kimberley.

Ablepharus greyii (Gray)

A small slender species growing to about $3\frac{1}{2}$ in., the distance from the tip of the snout to the fore limb 2.4 in the distance between the axilla and the groin. Eye not completely surrounded

by granules. Rostral widely in contact with the frontonasal, which is narrowly in contact with the small frontal. Prefrontals large. Frontal lozenge-shaped, not much larger than the interparietal, smaller than the prefrontals; 2 supraoculars, the 1st strip-shaped and almost in contact with its fellow behind the frontal; 1st supra-ciliary almost as long as the supraocular; 3 upper labials in front of the much enlarged subocular; one pair of nuchals; frontoparietals fused; interparietal free, very small. Ear very small, indistinct. Fore limb with 4 digits, hind limb with 5, the adpressed limbs do not meet; the hind limb as long as the distance from the tip of the snout to the fore limb. Tail a little longer than the head and body. In a complete specimen the measurements are: head and body, 38 mm.; tail, 42.5.

Olive-brown or brown above with a more or less distinct dorso-lateral dark band from the snout, through the eye and over the ear to the hind limb; upper lip and under surface pale greenish white, the subcaudals spotted.

Widely distributed in the State from the Pilbara to the south coast and east to the South Australian border. It is known from the Canning Stock Route.

Ablepharus rhodonoides L. & F.

Form slender and attenuated, the distance between the tip of the snout and the fore limb about $2\frac{1}{2}$ in the distance between the fore limb and the hind limb. Nasals large, forming a suture behind the rostral; frontonasal much wider than long, forming a suture with the frontal; prefrontals widely separated; frontal large, as long as the fused frontoparietals and free interparietal together; 3 supraoculars; 3 or 4 pairs of nuchals; 3 upper labials in front of the subocular. Ear opening distinct. Body scales smooth, the dorsals largest, 2 enlarged preanals. Limbs short widely separated where adpressed, with 3 digits. Tail partly replaced, shorter than the head and body. Head and body, 43 mm.; fore limb, 5; hind limb, 10; tail partly reproduced, 26.

Olive brown above uniform, no indications of dark spots or lines, lower surface paler with indistinct longitudinal lines.

Widely distributed in the interior of the State, the single Museum specimen is from Goddard's Creek. It is recorded from the Strelley River and Boulder. The specimen reported from Perth, now in the Australian Museum, Sydney, was probably collected inland.

Ablepharus reginae sp. n.

When in the Queen Victoria Spring area in January 1959, W. H. Butler collected a single specimen of an *Ablepharus* which is apparently new to science. It is a member of the section with a pair of frontoparietals and an interparietal but differs from the other Australian species in possessing five fingers and five toes, and in having 28 scales round the body. The coloration also is unusual, being white-spotted above.

Description: Head narrow, tapering, snout rounded; rostral not projecting. Eye incompletely surrounded by granules; nasals small, widely separated by the frontonasal; no supranasals; frontonasal wider than long, about as large as the frontal, having a wide suture with the rostral and a narrow one with the frontal; prefrontals large; frontal kite-shaped, about as long as its distance from the rostral, almost as wide as the supraocular region, in contact with two of the four supraoculars; second supraocular largest; five supraciliaries, second largest; frontoparietals almost as long as the frontal; in contact with the frontal and three supraoculars; interparietal small, lozenge-shaped; parietals large, as long as the distance from the tip of the snout to the frontal, narrowly in contact with the fourth supraocular; one pair of band-like nuchals about four times as wide as long, in contact with the enlarged upper temporal. Ear opening roundish, much smaller than the pupil, without lobules. Scales smooth, the two vertebral series enlarged; 28 rows round the middle of the body, ventral scales smaller than the dorsals, laterals smallest; preanals enlarged. Tail, basal part only preserved, covered with scales larger than the dorsals and ventrals of the body. Limbs short, when adpressed they do not meet, toes long and slender, the fourth much the longest, as long as the distance between the nostril and the ear.

General coloration: Above dark olive, the pale bases of the scales, which are minute on the scales near the vertebral series, increase in size until laterally the scales appear to be white-spotted and gradually pass into the whitish ventral surface; a brownish wash on the head, limbs and tail above; lips pale and a distinct white patch behind the eye.

Measurements: Distance from the tip of the snout to the fore limb 1.7 in the distance between the axilla and the groin. Head and body 39 mm.; fore limb, 9; hind limb, 11.5; tip of snout to fore limb, 13; fore limb to hind limb, 22.

Type locality: Queen Victoria Spring, Western Australia. Holotype R/3300 in the collection of the Western Australian Museum.

Ablepharus broomensis Lonnb. and And.

Eye not completely surrounded by granules. Rostral widely in contact with the frontonasal, which is narrowly in contact with the frontal; frontal small not much larger than a frontoparietal; in contact with the 1st supraocular and an enlarged supraciliary. Frontoparietals and interparietal distinct. Ear opening small. Four upper labials in front of the enlarged subocular. 22 smooth scales round the body, a pair of somewhat enlarged preanals. Limbs with 5 digits, the adpressed limbs overlap, the hind limb does not reach the axilla.

Brownish, each scale with a black dot and a wide brown margin; head above and on the sides mottled with black; lower side of head and body, bluish-white.

West Kimberley; the type locality is Broome.

Ablepharus elegans (Gray)

A small slender species, the distance between the tip of the snout and the fore limb 2.1 to 2.6 in the distance between the fore limb and the hind limb. Eye usually incompletely surrounded by granules; frontonasal narrowly in contact with the rostral or just separated by the nasals, widely in contact with the frontal; prefrontals fairly small, widely separated; frontal wider than the supraocular region, in contact with two supraoculars, almost as long as its distance from the nuchals, longer than its distance from the tip of the snout; 3 upper labials in front of the slightly enlarged subocular; 3 supraoculars, 3 or 4 pairs of nuchals; frontoparietals and interparietal separate, the latter shield the largest. Ear openings very small. Scales smooth, dorsals larger than the ventrals, laterals smallest but subcaudals largest. Limbs short, with four digits, the adpressed limbs do not meet; the fore limbs fit into a depression, toes on hind limb long and slender. Length $3\frac{3}{4}$ in. (41 + 51 mm.).

Bronzy above, head marked with darker; each dorsal scale with a dark spot producing 4 lines along the body, sometimes more or less distinct. A dark dorsolateral band, visible from above, extends from the snout through the eye and over the ear to the tail where it becomes indistinct; it is edged below by a fine white line. Lower surface uniform pale, sometimes the ventrals are dark-edged.

Distribution from Geraldton, south to Albany and east to Esperance and Eucla. It occurs on the Abrolhos, Rottnest and the Recherche Archipelago.

Ablepharus muelleri Fischer

Slender and elongate, the distance between the tip of the snout and the fore limb about $2\frac{1}{3}$ in the distance between the axilla and the groin. Eye incompletely surrounded by granules; nasals forming a suture behind the rostral; frontonasal wider than long with a wide suture with the frontal; prefrontals widely separated; frontal as long as its distance from the tip of the snout, in contact with 2 of the 3 supraoculars; one enlarged supraorbital situated between the 1st and 3rd supraoculars; frontoparietals and interparietal distinct, 3 upper labials in front of the slightly enlarged subocular. Ear opening very small, distinct. Two large preanals. Limbs short with 3 digits, the hind limb almost as long as the distance between the tip of the snout and the fore limb, the adpressed limbs do not meet. Tail longer than the head and body. A specimen in the Museum measures head and body, 48 mm.; tail, 56.

Metallic green or bronzy with a dark dorsolateral band from the nostril, through the eye and over the ear along the body, fading out rapidly on the tail. Under surface pale.

The specimens in the Museum are from Strelley River, Learmonth, Manberry Station and Minilya Station.

Ablepharus lineatus (Bell)

Form slender, elongate, the distance between the tip of the snout and the fore limb $2\frac{1}{2}$ in the distance between the axilla and the groin. Eye incompletely surrounded by granules. Rostral slightly projecting, narrowly in contact with the frontonasal, which has a wide suture with the frontal. Prefrontals small, widely separated; frontal nearly as long as its distance from the tip of the snout, in contact with 2 or 3 supraoculars; frontoparietals and interparietal distinct; interparietal much larger than the frontoparietals; 3 pairs of nuchals; 3 upper labials in front of the slightly enlarged subocular. Ear opening very small. Scales smooth, dorsals largest, 2 enlarged preanals. Limbs short, fore limb with 2 digits, hind limb with 3, the adpressed limbs fail to meet; hind limb as long as the distance between the front of the eye and the fore limb.

Whitish, the two vertebral series of scales each with a dark streak forming a double band from the head on to the tail. A wide dark dorsolateral band extends from the nostril through the eye and over the ear to the tail, under surface pale cream, immaculate, limbs inclined to be reddish.

Known from Perth, Rottnest and Garden Islands.

NATURAL HISTORY NOTES FROM JIGALONG, NORTH-WESTERN AUSTRALIA

By ERIC LINDGREN, West Perth.

I. INTRODUCTION

Jigalong Mission lies on the edge of the Gibson Desert at lat. $23^{\circ} 24'$ S. and long. $120^{\circ} 46'$ W. It is about 280 miles north of Meekatharra, 50 miles north-east of Mundiwindi, and is 33 miles east of the Great Northern Highway.

Geologically Jigalong is situated in the area of the Nullagine Series (Pre-Cambrian) of sedimentary and metamorphosed rocks. These are predominantly sandstones, quartzites and conglomerates, but here and there are later intrusions of igneous rocks, notably quartz (Jutson, 1956).

To the west of the mission are low undulating hills covered mostly by "spinifex" (*Triodia* sp.) and Mulga (*Acacia aneura*), while to the east lies a series of broken ridges, outliers of the nearby Robertson Range, over which according to the natives "the desert begins."

Lying in an area of rainfall averaging between 5 in. and 10 in., Jigalong is officially in the desert country. Rainfall is very erratic, there being marked peaks every five or so years, with drought and semi-drought conditions in between.

Temperatures range up to 120° F. during the summer months, when most of the rain falls, and down to about 45° F. in the winter, accompanied by chill easterly winds. Regular rains can be relied